DOCUMENT RESUME

ED 052 790 LI 002 934

TITLE	Economy in Government: Automatic Data Processing Equipment; Report of the Subcommittee on Priorities and Economy in Government . . . Together with Supplemental Views.
INSTITUTION	Joint Economic Committee, Washington, D.C.
PUB DATE	21 May 71
NOTE	22p.; (10 references)
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($.15)
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*Computers, *Cost Effectiveness, *Electronic Equipment, *Equipment, Equipment Maintenance, Expenditures, Federal Government, Purchasing
IDENTIFIERS	*Automatic Data Processing Equipment

ABSTRACT

This report is based on hearings that the subcommittee held on July 1, 1970, entitled "Economy in Government Property Management--Procurement of Data Processing Equipment" as well as General Accounting Office and General Services Administration reports. It focuses upon the phenomenal growth in the use of automatic data processing equipment by the Government and the adequacy of existing policies for the efficient procurement and management of these resources. Both the report and the hearings are part of the subcommittee's continuing interest in the efficient procurement and management of government property. (Author)

ED052790
LI 002 934

92d Congress
1st Session } JOINT COMMITTEE PRINT

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ECONOMY IN GOVERNMENT: AUTOMATIC DATA PROCESSING EQUIPMENT

REPORT

OF THE

SUBCOMMITTEE ON PRIORITIES AND ECONOMY IN GOVERNMENT

OF THE

JOINT ECONOMIC COMMITTEE CONGRESS OF THE UNITED STATES

TOGETHER WITH

SUPPLEMENTAL VIEWS

MAY 21, 1971

Printed for the use of the Joint Economic Committee

U.S. GOVERNMENT PRINTING OFFICE
58-448 WASHINGTON : 1971

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 15 cents

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LETTER OF TRANSMITTAL

MAY 21, 1971.

To the members of the Joint Economic Committee:

Transmitted herewith is a report by the Subcommittee on Priorities and Economy in Government, previously referred to as the Subcommittee on Economy in Government, entitled "Economy in Government Property Management—Procurement of Data Processing Equipment."

This report is based on hearings that the subcommittee held on July 1, 1970, entitled "Economy in Government Property Management—Procurement of Data Processing Equipment," as well as General Accounting Office and General Services Administration reports. It focuses upon the phenomenal growth in the use of automatic data processing equipment by the Government and the adequacy of existing policies for the efficient procurement and management of these resources. Both the report and the hearings are part of the subcommittee's continuing interest in the efficient procurement and management of government property.

Sincerely,

WILLIAM PROXMIRE,
Chairman, Joint Economic Committee.

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ECONOMY IN GOVERNMENT: AUTOMATIC DATA PROCESSING EQUIPMENT[1]

I. Summary

The Subcommittee on Economy in Government of the Joint Economic Committee has for several years been concerned about the procurement and management of government automatic data processing equipment (ADPE).[2] This has been a part of the subcommittee's broad interest in economy in government procurement and management activities.

In our 1968 report, "Economy in Government Procurement and Property Management," the subcommittee noted the growth in the use of ADPE by the Federal Government. The subcommittee also expressed concern that this growth of ADPE had not been accompanied by: a complete inventory of government ADPE resources, dependable estimates of government ADPE costs, adequate accounting of government ADPE resources furnished to commercial contractors, or an effective management system for government ADPE resources. In our 1969 report, "The Economics of Military Procurement," the subcommittee's interest focused on the inadequacy of the Truth-in-Negotiations Act as a protective device to the Government in the procurement of ADPE in noncompetitive markets. In both of these reports, the Subcommittee on Economy in Government made a number of specific recommendations to improve the procurement and management of ADPE for the Government.

This report is an evaluation of the progress that has been made on the subcommittee's earlier recommendations and the general status of government policies for the procurement and management of ADPE. The subcommittee finds, as might be expected, that there has been progress but that serious deficiencies remain. As we increase our knowledge about the size and composition of government resources devoted to automatic data processing equipment, new problems are uncovered. It also appears that responsible executive agencies have not always acted promptly on the solution of previously identified problems. As a result, there appears to be a net increase in the number of serious deficiencies in this area.

PRINCIPAL FINDINGS

A full accounting of the progress and problems associated with government ADPE is contained in the main body of this report. The principal findings of the Subcommittee on Economy in Government, associated with our hearings on automatic data processing equipment held on July 1, 1970, are summarized below.

[1] Due to the pressure of other responsibilities, Senator Sparkman was unable to participate in the hearing and other subcommittee deliberations pertaining to this report.

[2] The term "automatic data processing equipment" describes a machine or groups of machines, input, arithmetic, storage, output and control devices which use electronic circuits, operate on discrete data, and perform computations and logical operations automatically by means of internally stored or externally controlled programed instructions.

There has been a phenomenal growth in use of automatic data processing equipment by the Federal Government. From fiscal year 1960 to fiscal year 1970, the total number of computers either purchased or leased by the Government increased from 531 to 5,277—an increase of 894 percent. The annual rate of increase has been 26 percent.

This phenomenal growth has been accompanied by serious deficiencies of central control and management. The Government still does not have a complete inventory of its ADPE resources. Information on the cost of Government ADPE lacks proper detail, does not cover all components of the existing inventory, and is not readily available. On a centralized basis, there is insufficient information on the degree to which Government computers are used and the benefits derived from them. This lack of information on the costs and benefits of Government ADPE resources precludes their efficient management. There is a great need for the Government to provide improved guidelines for the acquisition and management of ADPE on a government-wide basis.

It is not clear which Government regulations and agencies control the commercial use of Government owned or financed ADPE.

Substantial savings in Government procurement of ADPE is possible if certain peripheral equipment is purchased from small, independent contractors. Additional savings could be obtained from government initiatives to further standardize interface equipment used between peripheral equipment and the central processing unit.

In many cases, Government procurement of ADPE has not complied with the Truth-in-Negotiations Act, which requires that the Government be supplied contractor cost data in noncompetitive bidding situations.

RECOMMENDATIONS

The Subcommittee on Economy in Government makes the following recommendations for improving the procurement and management of government automatic data processing equipment. These recommendations are based on the findings of our hearings held on July 1, 1970, General Accounting Office reports, and General Services Administration reports.

1. The Office of Management and Budget, the Secretary of Defense, and the Appropriations Committees of Congress should consider a moratorium on further procurement of ADPE systems until it is determined that the existing Federal ADPE inventory is being efficiently and properly utilized.

2. The Office of Management and Budget should require utilization and cost reporting for all government-owned and leased ADPE. Every effort should be made to minimize the use of special categories, such as those now used for defense, space, and communications, in the management of government ADPE. Under present practices these categories work against coordinated management.

3. The Office of Management and Budget, in conjunction with the Department of Defense and the General Services Administration, should develop and maintain estimates of the total annual cost of all ADPE to include "special" category systems and the ADPE physically installed in weapons systems.

4. The General Services Administration should improve its ADPE management information system: (*a*) to provide annual figures on the cost of all Federal Government purchase, rental, and operation of both hardware and software ADPE; (*b*) to provide timely and realistic projections of acquisitions and releases of ADPE by Federal agencies in order to improve utilization efforts and to prevent overbuying; (*c*) to ensure that the records of the ADPE management information system are kept current enough to be useful to Federal agencies and Congress.

5. The General Services Administration, in accordance with BOB Bulletin No. 70-9, should require that Federal agencies make every effort to replace more expensive ADPE system components with less expensive, compatible equipment available plug-to-plug from other sources.

6. The Department of Commerce should direct the National Bureau of Standards to accelerate its efforts, including the expenditure of additional funds if necessary, to standardize the interface media between peripheral equipment and the central processing units of ADPE. The General Services Administration should assist the National Bureau of Standards in this program.

7. The General Accounting Office, in conjunction with the General Services Administration, should prepare an in-depth study of the utilization of the fiscal year 1970 ADPE inventory, particularly that allocated for defense, space, intelligence and communications, and report its findings and recommendations to the Congress at the earliest possible date.

8. The General Accounting Office should make an independent estimate of the total annual costs of all government ADPE.

9. The General Accounting Office should determine the extent to which government-owned and leased ADPE is used for commerical purposes, the adequacy of remuneration to the Government, and who possesses the title rights to ADPE that is procured by contractors under rental-purchase agreements.

10. The Congress should reevaluate the language of the "Truth-in-Negotiations Act," Public Law 87-653, and consider amending it so that government contracting officers have adequate price and cost information when negotiating contracts.

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II. The Procurement and Management of Automatic Data Processing Equipment

The July 1, 1970, hearings of the Subcommittee on Economy in Government of the Joint Economic Committee were primarily concerned with the status of our earlier recommendations on the management and procurement of automatic data processing equipment (ADPE).[1] In the subcommittee's 1968 report,[2] we noted that the growth in the use of ADPE equipment by the Federal Government had been accompanied by serious deficiencies: there was no complete inventory of government ADPE; there was no satisfactory estimate of the annual costs of ADPE; there was no adequate governmentwide ADPE management program working for the efficient use of ADPE; and the existing procurement process of peripheral components excluded the healthy competition of small firms. As first steps, the subcommittee recommended:

> The inventorying of all government-owned automatic data processing equipment (ADPE), including equipment furnished to contractors, should be completed as soon as possible and kept current so as to prevent unneeded future purchases.
>
> GSA should make it possible for smaller manufacturers of ADPE to furnish part of the Government's requirements. Specifications should not be designed around the products of certain companies which have the effect of eliminating competition and stifling the incentive of smaller manufacturers.

FEDERAL ADPE INVENTORY DEVELOPMENTS

The July 1, 1970, hearings of the Subcommittee on Economy in Government disclosed that the General Services Administration (GSA), under the guidance of the Office of Management and Budget (OMB), had completed an inventory of total ADPE equipment in the Federal Government for fiscal 1969. This inventory revealed that there were 4,666 ADPE systems in use by the Federal Government. Of the total, 2,910 (62 percent) were owned by the Government and the rest were on lease. The inventory also revealed that 3,039 systems of the total inventory were used for general purposes, such as inventory control and personnel data, and that this equipment was subject to the utilization reporting of the General Services Administration.

On the other hand, testimony revealed that 1,629 systems were in a special category, exempt from the ADPE utilization reporting of the General Services Administration, because "their use is dependent upon the complexity of the environment in which they are employed." Examples of the special exemptions given were: (1) control system equipment, where the ADPE is an integral part of a total facility or

[1] Hearings before the Subcommittee on Economy in Government of the Joint Economic Committee entitled, "Economy in Government Procurement and Property Management—Procurement of Data Processing Equipment," July 1, 1970.

[2] Report of the Subcommittee on Economy in Government of the Joint Economic Committee, entitled "Economy in Government Procurement and Property Management," April 1, 1968.

larger complex of equipment and has the primary purpose of controlling, monitoring, analyzing, or measuring a process; (2) classified system equipment, where the physical location of the ADPE is classified; and (3) mobile systems equipment, where the ADPE is physically installed on mobile vans, ships, and planes.

The net effect of this two standard classification scheme has been to weaken the accountability for ADPE in the fields of space, intelligence, and defense. This bias is further aggravated by the fact that computers considered integral to weapons systems are completely excluded from the Government ADPE inventory.

Additional testimony by the General Accounting Office revealed that the management information system for controlling the present ADPE inventory, in accordance with BOB Circulars A–55 and A–83, did not provide timely and complete data. There were no adequate projections of acquisitions and releases of ADPE by the Federal agencies and the information gathered was reported to Federal agencies with as much as a 6-month lag. As a result, according to General Accounting Office testimony, Federal agencies made little use of the ADPE management information system.

It is essential to good management to know the total value of resources as well as annual operating and acquisition costs. During the July 1, 1970, hearings, the subcommittee focused on the total annual costs of ADPE acquisition and operation. Testimony from the Office of Management and Budget revealed that the total cost of general purpose ADPE in the Federal inventory was $1.9 billion for fiscal year 1969; this included purchases, rentals, and personnel.

The subcommittee was unable, however, throughout the course of the hearings, to obtain a satisfactory estimate of the total annual cost of government ADPE. It appears that the major missing components of this total cost figure are: (*a*) ADPE installed in contractor facilities and equipment used by government contractors in grant-in-aid programs, universities, and other arrangements of this sort; (*b*) ADPE placed in a special category by GSA because it is used as part of a larger system;[3] (*c*) ADPE that is physically installed within a weapons system.[4]

The subcommittee's 1968 report also recommended that an ADPE inventory include government-owned equipment furnished to contractors involved in government contracting. Testimony from the Office of Management and Budget revealed that the ADPE inventory contained 875 government-owned, general purpose ADPE systems that are in the hands of contractors who operate such equipment in the execution of various cost reimbursement type contracts.[5] These include the following:

> (1) When equipment is leased and the total cost of leasing is to be reimbursed under one or more cost reimbursement type contracts, or

[3] Subsequent to the hearings, the Office of Management and Budget provided the subcommittee with an estimate of the annual cost of this special category, which also altered their estimate of the total annual costs. "The total cost is made up of the $1,937 billion, plus $29 million in rental, $39 million for purchases and an extrapolation of $185 million in personnel, support and services for the exempt categories. This makes the total costs $2.19 billion for fiscal year 1969." Hearings, "Economy in Government Procurement and Property Management—Procurement of Data Processing Equipment," July 1, 1970, p. 42.

[4] Subsequent to the hearings, the Department of Defense provided the subcommittee with an estimate of the portion of the costs integral to weapons systems and other classified uses not included in the ADPE management information system prescribed by BOB Circular A–83. For fiscal year 1971, the dollar amount budgeted for the DOD portion special purpose category was $297,084,000. Letter, Robert C. Moot, Assistant Secretary of Defense, October 23, 1970.

[5] Hearings, "Economy in Government Property Management—Procurement of Data Processing Equipment," July 1, 1970, p. 38.

(2) When equipment is purchased by the contractor for the account of the Government or title will pass to the Government, or

(3) When equipment is furnished to the contractor by the Government, or

(4) When the equipment is installed in government-owned, contractor-operated facilities.

This information improved the subcommittee's understanding of the magnitude of government-owned ADPE furnished to contractors and, to some extent, the conditions under which it is furnished.

There remain, however, some unresolved questions with regard to government-financed ADPE provided to private contractors. First, to what extent does the Government pay for ADPE equipment procured by contractors, under rental purchase agreements, where the equipment becomes the property of the contractor rather than the Government? The subcommittee was unable to obtain a clear understanding of who holds the title in most of these cases.

Second, there is no adequate information on the extent to which government-financed ADPE is used for commercial purposes. Moreover, the Office of Emergency Preparedness (OEP) regulation for controlling the commercial use of industrial plant and equipment, OEP Order 8555.1, does not apply to ADPE, and it is not clear what government regulations or agencies control the commercial use of ADPE. Finally, it is not clear what rental rates apply when ADPE is used commercially.

The very poor record of many large corporations in using government-owned industrial plant equipment (IPE), as disclosed by previous General Accounting Office studies and hearings before this subcommittee, causes us to be concerned about the lack of regulation and control over the commercial use of ADPE.

THE FISCAL 1970 ADPE INVENTORY

New information on the Federal Government's ADPE inventory did not come to the subcommittee's attention until after the July 1, 1970, hearings. On August 14, 1970, the General Services Administration published the "Fiscal Year 1970 Inventory of ADPE in the United States Government." This inventory, done at the request of Congress, provides revealing information on the phenomenal growth and allocation of ADPE within the Federal Government.

The fiscal 1970 inventory shows that, between fiscal year 1960 and fiscal year 1970, the total number of computers purchased or leased by the Federal Government increased from 531 to 5,277—an increase of 894 percent. This amounts to almost a ninefold increase in 10 years. The text accompanying this data justified this phenomenal growth with the statement: "The rapid growth in the number of computers in recent years is indicative of an increasing awareness on

the part of Federal agencies that mission programs can be accomplished more timely, efficiently, and economically through automation." The subcommittee seriously questions this justification. While some of the computer growth is no doubt due to the careful application of computer systems to increasing the efficiency of Government operations, we are skeptical that the tremendous growth in this equipment can be explained this easily.

In fact, in the subcommittee's past investigations of weapons systems and related defense equipment, computer equipment has been a major contributor to unreliable performance and large cost increases. The major study in this area, "Improving the Acquisition Process for High Risk Military Electronics Systems," which sampled 13 major aircraft and missile systems costing $40 billion, also supports this conclusion.[6] The recent General Accounting Office study, "Acquisition of Major Weapons Systems," which finds modest cost growth for six communications and radar electronic systems estimated to cost $3.6 billion, would not support this conclusion.[7] However, the General Accounting Office findings for the electronics category does not mitigate the previous evidence received by the subcommittee because that category includes only communications and radar systems in the development stage. Major weapons systems—aircraft, missiles, and ships—and the associated computer equipment, are carried as separate categories.

Thus the record for weapons systems does not appear to support the simple thesis that "more ADPE means more efficiency." The subcommittee believes, in fact, that this thesis is to some extent folklore and that the time has come for the Federal Government to provide precise explanations of the numerous benefits claimed for more and more computers.

The subcommittee believes it is appropriate to emphasize the management of ADPE associated with defense because such a large proportion of our computer resources are presently allocated to the Department of Defense and other defense-related activities. Table 1 contains the distribution of the fiscal 1970 inventory by agency. The table shows there were 5,277 computers in the Federal Government's possession, consisting of 3,202 general purpose and 2,075 special purpose systems. The Department of Defense was in possession of 3,199 of these computers, which amounts to 60 percent of the total inventory. In addition, two agencies engaged in extensive defense-related activities, the Atomic Energy Commission and the National Aeronautics and Space Administration, had possession of another 27 percent of the inventory. Since the existing inventory does not include ADPE integral to weapons systems, even these numbers understate the total amount of Federal Government computers used for defense purposes.

[6] Richard Stubbing, "Improving the Acquisition Process for High Risk Military Electronics Systems," Paper, Princeton University, 1968.
[7] General Accounting Office, "Acquisition of Major Weapon Systems." Report, B-163058, Mar. 18, 1971.

TABLE 1.—DISTRIBUTION OF COMPUTERS BY AGENCY AS OF JUNE 30, 1970

Agency	General	Special	Total	Percent
Atomic Energy Commission	147	607	754	14.3
Department of Agriculture	40	2	42	0.8
Department of Commerce	49	24	73	1.4
Department of Defense	2,410	789	3,199	60.6
Air Force	(1,035)	(175)	(1,210)	(22.9)
Army	(658)	(269)	(927)	(17.6)
Defense Supply Agency	(108)	(17)	(125)	(2.4)
Navy	(577)	(317)	(894)	(16.9)
Other DOD	(32)	(11)	(43)	(0.8)
Department of Transportation	33	85	118	2.2
General Services Administration	22	5	27	0.5
Health, Education, and Welfare	81	15	96	1.8
Department of the Interior	41	5	46	0.9
National Aeronautics and Space Administration	165	527	692	13.1
Treasury Department	77	----------	77	1.5
Veterans' Administration	41	----------	41	0.8
Other civil	96	16	112	2.1
Total	3,202	2,075	5,277	100.0

Source: Fiscal year 1970, Inventory of Automatic Data Processing Equipment in the United States, General Services Administration, Federal Supply Service.

It also appears that this lopsided allocation of Government computers is to be maintained by prevailing trends. Table 2 shows where the most recently acquired Government computers, those added to the inventory between fiscal 1969 and 1970, have been allocated. Of the 611 increase in Government computers over this period, 301 computers (49 percent) went to the Department of Defense, 195 computers (32 percent) went to the Atomic Energy Commission, and 50 computers (8 percent) went to the National Aeronautics and Space Administration. Thus, 89 percent of the most recent increase in government computers occurred in defense or defense related agencies.

TABLE 2.—DISTRIBUTION OF FISCAL 1970 ADDITIONS TO COMPUTER INVENTORY

Agency	Number of computers		Difference, fiscal year 1970 minus fiscal year 1969
	Fiscal year 1969	Fiscal year 1970	
Atomic Energy Commission	559	754	+195
Department of Agriculture	39	42	+3
Department of Commerce	59	73	+14
Department of Defense	2,898	3,199	+301
Air Force	(1,125)	(1,210)	(+85)
Army	(794)	(927)	(+133)
Defense Atomic Support Agency	(6)	(9)	(+3)
Defense Communications Agency	(21)	(24)	(+3)
Defense Supply Agency	(121)	(125)	(+4)
Navy	(823)	(894)	(+71)
Office, Secretary of Defense	(8)	(10)	(+2)
Department of Transportation	100	118	+18
General Services Administration	27	27	0
Health, Education, and Welfare	84	96	+12
Department of Interior	47	46	−1
National Aeronautics and Space Administration	642	692	+50
Treasury Department	68	77	+9
Veterans' Administration	40	41	+1
Other	103	112	+9
Total	4,666	5,277	+611

Source: Estimated by the General Services Administration.

A full understanding of how well the Government ADPE available to the Department of Defense is used—either general purpose, special purpose, or weapons systems—is a matter the subcommittee did not

have sufficient opportunity to thoroughly explore in its July 1, 1970, hearings. The subcommittee notes, however, that a detailed investigation made by the Fitzhugh Report disclosed serious deficiencies in the Department of Defense management of general and special purpose ADPE. First, the computers owned and leased by the Department of Defense have utilization rates in the range of 50 to 60 percent. Second, the present organizational assignment of responsibilities for ADPE policy formulation, management, and operation is inadequate to maintain the most efficient and economical use of ADPE either departmentwide, or within a military department or Defense agency. In the words of the Report:

> Neither is any office charged with the responsibility for periodic review of existing ADP installations and operations or for minimizing the total cost of computers. Reviews are now focused on requirement justification and procurements. A standard for measurement of total ADP costs does not exist today, nor does the means of computing such total costs for a given ADP installation or operation.[8]

The subcommittee views this as an extremely serious situation and will consider holding future hearings solely on the utilization of ADPE in the Department of Defense, if this lack of management is not rectified.

PROCUREMENT OF PERIPHERAL EQUIPMENT

The subcommittee's recommendation on the procurement of peripheral equipment from small manufacturers, which was to stimulate competition in ADPE procurement in general, has been implemented to a considerable degree. The General Accounting Office, responding to a request made by the subcommittee in its 1968 report, made an extensive investigation of the procurement of peripheral equipment used in conjunction with the ADPE systems. That report, B–115369, entitled "Study of the Acquisition of Peripheral Equipment for use with Automatic Data Processing Systems," June 24, 1969, contained the following important findings:

> Recently, numerous independent manufacturers of peripheral equipment—magnetic tape units, disk storage drives, etc.—have made a concentrated effort to compete with the systems manufacturers and to offer selected items of equipment directly to users.
>
> The study shows that it is common practice for Government ADP managers to obtain all required ADP equipment from computer systems manufacturers even though certain items of equipment can be procured more economically from the original manufacturers or from alternate sources of supply.
>
> GAO identified selected computer components that are directly interchangeable (plug-to-plug compatible) with certain other systems manufacturers' components and are available at substantial savings.

[8] "Report to the President and the Secretary of Defense on the Department of Defense by the Blue Ribbon Defense Panel," July 1, 1970, p. 156.

GAO found that a number of private organizations had installed available equipment of plug-to-plug compatibility and had achieved substantial savings. Yet it found only a few instances where Federal agencies had availed themselves of this economical means of acquiring computer components. Central agency leadership could provide impetus which would achieve similar savings in the Federal Government. (The General Services Administration (GSA) has recently started a test to determine the possibilities of achieving savings by using equipment of plug-to-plug compatibility.)

On the basis of observations at commercial organizations visited during the study, GAO believes that the acquisition of plug-to-plug compatible components for ADPE systems, either in operation or on order, provides an opportunity for Federal agencies to achieve significant savings in costs, an objective which is in line with the President's program of cost reduction in the Federal Government.

GAO believes that, if more systematic attention is given to acquiring non-plug-to-plug components by the executive branch of the Federal Government, significant savings also can be achieved.

GAO estimates that, if plug-to-plug compatible components were used to replace similar components rented by the Government, annual savings would be at least $5 million. If such components were to be purchased, savings would exceed $23 million.

GAO believes that, in addition to the estimated savings in acquiring plug-to-plug compatible components, savings are also available in the acquisition of non-plug-to-plug components from sources other than the systems manufacturers.

It is estimated that the purchase cost of such components, now being leased for about $50 million, from the systems manufacturers would be about $250 million; whereas the acquisition price for similar components from an alternative source of supply probably would be about $150 million, a difference of $100 million.

GAO suggests, however, that the potential savings must be evaluated in light of costs associated with combining the components into a total computer system.

As a result of these findings, the General Accounting Office made several recommendations for the procurement of peripheral equipment. It recommended that the Director of the Office of Management and Budget and the Administrator of the General Services Administration provide more specific guidelines for the evaluation and selection of plug-to-plug compatible equipment and other components. It also recommended that the head of each Federal agency take immediate action to implement steps requiring replacement of leased components that could be replaced with more economical plug-to-plug compatible units.

The General Accounting Office report stimulated an Executive Branch program, headed by the Office of Management and Budget and formalized in BOB Bulletin No. 70–9, to increase the use of independent peripheral manufacturers as a competitive source of supply

for some peripheral items of ADPE. At the subcommittee's hearings on July 1, 1970, virtually all the witnesses agreed that savings of several million dollars had been made through this program. The subcommittee also was pleased to learn that there had been some improvement in the ability of small contractors to compete in supplying peripheral equipment. The subcommittee encourages the General Services Administration to continue procurement policies that give full opportunities to small contractors.[9]

The July 1, 1970, hearings also developed information on the substantial savings that could result from the standardization of interface equipment used between peripheral equipment and the central processing unit. Such a standardization process would allow a wider use of non-plug-to-plug peripheral equipment with government ADPE systems. The General Accounting Office testified that such a standardization process would save the Government at least $100 million per year. Virtually all expert testimony agreed that substantial savings would occur.

The subcommittee learned, however, that little progress was being made on the standardization process. The American National Standards Institute, a privately supported organization working for voluntary standards in the United States, had achieved limited success in studying the feasibility and practicality of input/output interface standardization since 1967.

Within the Government the development of such a technical standard is the responsibility of the National Bureau of Standards (NBS) of the Department of Commerce. However, testimony revealed that the National Bureau of Standards, while interested in the interface standardization problem, had given no real priority to its solution. In fact, only one-half a man-year had been devoted to this program at the time of our hearings. In view of the consensus of expert opinion that great savings would result from the development of an adequate interface standard, and that standardization is technically feasible, the Commerce Department and the National Bureau of Standards appear to have been remiss in pursuing an exceptionally good opportunity for genuine economy in the Federal Government. It is hoped that, even if it means additional staff for the National Bureau of Standards, a greater effort will now be made on the interface standardization problem.

THE TRUTH-IN-NEGOTIATIONS ACT

The Truth-in-Negotiations Act (Public Law 87–653) was intended to provide the Government with better access to contractors' cost data in cases where there is no resort to competitive bidding. At its earlier hearings, the committee learned that the present dominant mode of contracting is negotiation rather than competitive bidding. In our 1969 report, "The Economics of Military Procurement",[10] the subcommittee indicated that the act was not being complied with in the case of new design computers. The subcommittee recommended at that time that the act be amended.

[9] Information received subsequent to the subcommittee's hearings provided evidence of Government savings in this area. In a January 12, 1970, letter to the Comptroller General, the Veterans' Administration reported that they expected to save over $1 million, on a single contract, as a result of procurement from an independent peripheral manufacturer.

[10] Report of the Subcommittee on Economy in Government, "The Economics of Military Procurement," May 1969, p. 9.

In the July 1, 1970, hearings, testimony indicated that ADPE manufacturers could not be required to reveal cost and price information as set forth in the Truth-in-Negotiations Act. A witness from the General Services Administration testified that under present practice the law was "one-sided" because it applied only to government contracting officers. Private contractors supplying ADPE to the Government were able to avoid compliance through a waiver provision of the act. The ability of ADPE contractors to avoid submitting cost and price data appears to be without justification. Accordingly, the subcommittee again recommends that the Congress consider amending the Truth-in-Negotiations Act.

Four possible alternatives for amending this law, provided to the subcommittee by the General Services Administration, are listed below. The proposed amendments would apply only to noncompetitive procurement cases, which is true of the present act. All of the proposed amendments strike the waiver provision of the present act. The remaining differences between the amendments have to do with government justification for requesting the data and the size of the contracts to be included.

The first alternative would require that anyone doing business with agencies of the U.S. Government submit cost or pricing data on items sought for procurement, when requested by the head of the agency, and be required to certify that the cost of pricing data is accurate, complete, and current. There would be no limitation on the size of the contract.

A second alternative would contain the same provisions as the first, but would be limited to cases deemed by the head of the agency to be essential to national security.

A third alternative would contain the same provisions as the second, but would also require the submission of information under circumstances described in the present Truth-in-Negotiations Act; namely, for pricing actions expected to exceed $100,000 in amount.

A fourth alternative would require submission of the information when requested by the head of the agency in order to negotiate a fair and reasonable price, and after the agency head states in writing his reasons for such a determination. This would apply only to procurement actions expected to exceed $100,000 in amount.

The specific language required to amend section 2306(f) of the Truth-in-Negotiations Act is set forth in the appendix.

SUPPLEMENTAL VIEWS OF SENATOR PERCY

In general, I agree with the thrust of this report, which is mainly oriented toward better cost accounting for ADP equipment, total annual costs for ADP equipment owned by the Government, an inventory of ADP equipment and recommendations that additional sources of supply of ADP equipment be sought out. The report also raises questions about Government-owned equipment furnished to private contractors that I think need to be raised.

However, I have serious reservations about a number of the statements contained in this report. In addition, other statements, when left standing alone, may lead to misinterpretation unless further explanatory data is furnished.

On page 2 of the report the statement is made that "There has been a phenomenal growth in use of automatic data processing equipment by the Federal Government. From fiscal year 1960 to fiscal year 1970, the total number of computers used by the Government increased from 531 to 5,277—an increase of 894 percent." These figures are correct, but they leave the implication through the use of the word "phenomenal" that this growth has been too high or out-of-line generally with the computer industry overall. Such is not the case however. The total number of computers in the United States in 1960 was 6,000. As of September 1970, the number of computers in use in the United States was 73,077 for a percentage increase of 1,218. Thus the case can be made that the Government use of computers—rather than showing phenomenal growth—is actually much slower than the growth of computers in the country as a whole.

On page 2 the report recommends—

> That the Office of Management and Budget, the Secretary of Defense, and the Appropriations Committees of Congress should consider the implementation of a moratorium on the further procurement of ADPE systems until it is determined that the existing ADPE inventory is being efficiently utilized.

I find a moratorium on the purchase of equipment a very strange recommendation. (1) Isn't the efficient or inefficient utilization of equipment a management burden rather than a ADPE problem? It's not the equipment that determines whether or not the equipment is efficiently utilized but rather the people running the equipment. (2) How do you determine whether the equipment is being efficiently utilized? (3) Would this moratorium hold regardless of need? There are administrative tasks that must be performed. Would the recent increase in social security pensions—which means recomputing millions of records—not be allowed to take place if additional equipment was needed? I think not. Rather there would be a waiver of the moratorium. The whole idea of a moratorium is not very practical to implement.

I strongly feel that the Office of Management and Budget should be directed to look at the question of efficient utilization of ADPE systems in the Government but I feel that a moratorium does not address itself to the real problems of management and is impractical to carry out.

Also on page 2 the report recommends that GSA provide "annual figures on the cost of all Federal Government purchase, rental, and operation of ADPE."

I agree with this recommendation and feel that it should be easy to provide, at least for general purpose computers, as manufacturers report such data monthly to GSA on general purpose computers.

On page 7 the report appears to be totally inaccurate. The report states "* * * in the subcommittee's past investigations of weapons systems and related defense equipment, computer equipment has been a major contributor to unreliable performance and large cost increases."

The fact that weapons systems may have had overruns does not mean that computers are unreliable or caused the cost overrun. You can't blame the computer for the overrun—someone was managing the project and fed the information into the computer. I find it difficult to blame cost overruns on ADPE.

Furthermore, electronics weapons systems—which include ADPE—have a better record on costs and delivery schedule than any other weapons systems. The GAO Report of March 18, 1971, "Acquisition of Major Weapon Systems," reports that on the average, weapon systems experienced a 33-percent schedule slippage. However, for electronics weapon systems there was only an 18-percent slippage. The GAO report further reports that the average cost growth of these systems was 30 percent but that the average cost growth of electronics systems was only 15 percent—the best record of any type of system. Thus I find the facts totally refute the statement in the report that computers are to blame for cost overruns.

Of this whole section, I think half of one sentence can stand on its own:

> * * * the time has come for the Federal Government to provide precise explanations of the numerous benefits claimed for more and more computers.

I agree that more information is needed.

Truth-in-Negotiations

On page 11 the report states that "the present dominant mode of contracting is negotiation rather than competitive bidding."

This statement leaves the implication that there is not much competition in the procurement of ADP equipment. This is not accurate. My own experience leads me to the conclusion that competition is fierce in this field. A negotiated contract does not mean there was lack of competition prior to or during the negotiations.

It is impossible to write specifications for ADPE equipment and then advertise for bids, as ADPE equipment manufacturers do not have products meeting a standard specification. If specifications were written, competition would actually be limited as they would normally only apply to one manufacturer.

Typically for ADPE procurement, Federal agencies go to negotiation as products and services of various companies are not identical. Rather, the agency writes job specifications rather than equipment specifications and then negotiates the price with various companies who can do the job in order to get the lowest price. Such negotiations are carried on with a number of companies and competition is keen. Equipment specifications are impossible to write as different companies use different equipment and mechanisms to achieve the same end result.

Beginning on page 12, the report suggests four alternatives for amending the Truth-in-Negotiations Act. All four alternatives are bascially variations on the first alternative.

The four alternatives are—

(1) Anyone doing business with agencies of the U.S. Government is required to submit cost or pricing data on items sought for procurement, when requested by the head of the agency, and be required to certify that the cost of pricing data is accurate, complete, and current.

(2) The same as No. 1 but limited to cases deemed by the head of the agency to be necessary to national defense or national security.

(3) The same as No. 2 but also covering pricing actions expected to exceed $100,000 in amount.

(4) The same as No. 3 but also requiring submission of data to negotiate a fair and reasonable price.

Therefore, it can be seen that all four alternatives directly relate back to alternative No. 1.

Taking the alternatives in reverse order:

(4) To require submission of data to negotiate a fair and reasonable price—this is the purpose of existing law—to negotiate a fair and reasonable price.

(3) To cover pricing actions expected to exceed $100,000 in amount—this is existing law.

(2) To submit data but limited to cases of national security or national defense—this is actually a limitation of existing law which covers all procurement.

(1) Alternative No. 1 is the real problem. As spelled out it would require:

> Anyone doing business within the United States, its territories, or possessions, shall be required to submit cost of pricing data on items sought for procurement when requested by the head of the agency, and shall be required to certify that, to the best of his knowledge and belief, the cost or pricing data he submitted was accurate, complete, and current.

This is a very open-ended recommendation. It would require all companies—not just ADPE companies—to submit cost and pricing data to the head of any Federal agency at any time for any reason. It would in effect put the head of any Federal agency on the board of directors, or more accurately, in the accounting division of any U.S. company doing business with the Federal Government. It would not limit the submission of such data as the condition for getting a Government award, but at any time for any reason.

Under current law such information must be provided prior to the Government award of a contract except in cases—

> Where the price negotiated is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, prices set by law or regulation or, in exceptional cases where the head of the agency determines that the requirements of this subsection may be waived and state in writing his reasons for such determination.

This recommendation of the report therefore raises the following serious questions:

(1) Why should a company have to provide cost and pricing data at any time on anything to the Government, whether or not he actually is a supplier to the Government?

(2) Does the company have to supply such pricing and cost data as the price of entering discussions with the Government rather than just as a final condition of obtaining an award?

(3) Can a company withdraw from competition for a Government award without giving this data?

(4) Why should the right of the agency head to give waivers in certain cases be eliminated?

Under present law, companies must provide cost and pricing data prior to award unless the price is well established commercially or is granted a waiver or the company withdraws from the competition. This alternative as written would seem to deny the right of the company to withdraw from the competition and not give the information and also would deny the agency head's right to grant a waiver.

This recommendation raises a basic philosophical question as to whether the Government is entitled to cost and pricing information whether or not the company has any intention of doing business with the Government. Further, it would radically change existing law and the report gives no substantive reasons why such changes should be made.

I think the committee does itself a disservice by writing such a sweeping recommendation, overthrowing existing law, based on the incomplete facts it has at its disposal.

Regretfully, I conclude that certain parts of this report raise more questions than they answer. In its effort to enlighten, it often does little more than muddy the waters.

APPENDIX

Proposed Amendment to Truth-in-Negotiations Act: The Four Alternatives

Subsection 2306(f) is amended as follows:

1. (f) Anyone doing business within the United States, its territories, or possessions, shall be required to submit cost or pricing data on items sought for procurement when requested by the head of the agency, and shall be required to certify that, to the best of his knowledge and belief, the cost or pricing data he submitted was accurate, complete and current.

(Any prime contract or change or modification thereto under which such certificate is required shall contain a provision that the price to the Government, including profit or fee, shall be adjusted to exclude any significant sums by which it may be determined by the head of the agency that such price was increased because the contractor or any subcontractor required to furnish such a certificate, furnished cost or pricing data which, as of a date agreed upon between the parties (which date shall be as close to the date of agreement on the negotiated price as is practicable), was inaccurate, incomplete, or noncurrent: *Provided*, That the requirements of this subsection need not be applied to contracts or subcontracts where the price negotiated is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.)

2. (f) Anyone doing business within the United States, its territories, or possessions, shall be required to submit cost or pricing data on items requested for procurement when such information is determined by the head of the agency to be necessary to national defense or national security and states in writing his reasons for such a determination, and shall be required to certify that, to the best of his knowledge and belief, the cost or pricing data he submitted was accurate, complete and current.

(Any prime contract or change or modification thereto under which such certificate is required shall contain a provision that the price to the Government, including profit or fee, shall be adjusted to exclude any significant sums by which it may be determined by the head of the agency that such price was increased because the contractor or any subcontractor required to furnish such a certificate, furnished cost or pricing data which, as of a date agreed upon between the parties (which date shall be as close to the date of agreement on the negotiated price as is practicable), was inaccurate, incomplete, or noncurrent: *Provided*, That the requirements of this subsection need not be applied to contracts or subcontracts where the price negotiated is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.

3. (f) Anyone doing business within the United States, its territories, or possessions, shall be required to submit cost or pricing data on items requested for procurement when such information is determined by the head of the agency to be necessary to national defense or national security and states in writing his reasons for such a determination, or under the circumstances listed below:

(1) When the award of any negotiated prime contract under this title is expected to exceed $100,000:

(2) When the pricing of any contract change or modification for which the price adjustment is expected to exceed $100,000 or such lesser amount as may be prescribed by the head of the agency.

(3) When the award of a subcontract at any tier, where the prime contractor and each higher tier subcontractor have been required to furnish such a certificate, if the price of such subcontract is expected to exceed $100,000; or

(4) When the pricing of any contract change or modification to a subcontract covered by (3) above for which the price adjustment is expected to exceed $100,000, or such lesser amount as may be prescribed by the head of the agency.

(Any prime contract or change or modification thereto under which such certificate is required shall contain a provision that the price to the Government, including profit or fee, shall be adjusted to exclude any significant sums by which it may be determined by the head of the agency that such price was increased because the contractor or any subcontractor required to furnish such a certificate, furnished cost or pricing data which, as of a date agreed upon between the parties (which date shall be as close to the date of agreement on the negotiated price as is practicable), was inaccurate, incomplete, or noncurrent: *Provided*, that the requirements of this subsection need not be applied to contracts or subcontracts where the price negotiated is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulations.)

4. (f) A prime contractor or any subcontractor shall be required to submit cost and pricing data on items requested for procurement, and any time after initial bids are received, when such information is determined by the head of the agency to be necessary to negotiate a fair and reasonable price, and states in writing his reasons for such a determination, or under the circumstances listed below:

(1) When the award of any negotiated prime contract under this title is expected to exceed $100,000;

(2) When the pricing of any contract change or modification for which the price adjustment is expected to exceed $100,000, or such lesser amount as may be prescribed by the head of the agency;

(3) When the award of a subcontract at any tier, where the prime contractor and each higher tier subcontractor have been required to furnish such a certificate, if the price of such subcontract is expected to exceed $100,000; or

(4) When the pricing of any contract change or modification to a subcontract covered by (3) above, for which the price adjustment is expected to exceed $100,000, or such lesser amount as may be prescribed by the head of the agency.

(Any prime contract or change or modification thereto under which such certificate is required shall contain a provision that the price to the Government, including profit or fee, shall be adjusted to exclude any significant sums by which it may be determined by the head of the agency that such price was increased because the contractor or any subcontractor required to furnish such a certificate, furnished cost or pricing data which, as of a date agreed upon between the parties (which date shall be as close to the date of agreement on the negotiated price as is practicable), was inaccurate, incomplete, or noncurrent: *Provided*, that the requirements of this subsection need not be applied to contracts or subcontracts where the price negotiated is based on adequate price competition, established catalog or market prices of commercial items sold in substantial quantities to the general public, or prices set by law or regulation.)

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